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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/798,763

03/11/2004

Xiaoyu Li

DP-310460

6443

22851

7590

11/06/2006

DELPHI TECHNOLOGIES, INC.

M/C 480-410-202

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EXAMINER

BOES, TERENCE

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/798,763	LI ET AL.	
	Examiner	Art Unit	
	Terence Boes	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 23 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 14-17, 19, 20 and 25 is/are rejected.
- 7) ☐ Claim(s) 11-13, 18 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/11/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species A, Figures 1-4 in the reply filed on 10/03/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 23 and 24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/03/2006.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the lower steering column jacket define[ing] mating teeth, as in claim 13, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-10, 19, 20, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiragushi JP 02133280A.

Hiragushi discloses:

- a lower steering column jacket (1) for attachment to a vehicle;
- an upper steering column jacket (7, or 11) engaged with said lower steering column jacket for telescoping movement for supporting a steering wheel in a desired longitudinal position relative to said lower steering column jacket;

- a tilt housing (21) engaged with said upper steering column jacket for tilting movement for supporting the steering wheel in a desired angular position relative to said upper steering column jacket;
- a single drive mechanism (23) for controlling said telescoping movement and said tilting movement.
- wherein said single drive mechanism includes a first mode of operation for moving said tilt housing in said tilting movement relative to said upper steering column jacket and a second mode of operation for moving said upper steering column jacket in said telescoping movement relative to said lower steering column jacket (see abstract).
- wherein said single drive mechanism includes a locking device (5 or 20) for locking said single drive mechanism in one of said first mode of operation and said second mode of operation.
- wherein said single drive mechanism includes a member (26) pivotally connected to said tilt housing to direct said tilt housing in said tilting movement.
- wherein said locking device selectively engages said member to lock said single drive mechanism in said second mode of operation (see abstract).
- wherein said locking device is further defined as being substantially fixed to said upper steering column jacket (both 5 and 20 are substantially fixed to said upper steering column jacket in that they are connected together in the same mechanism).

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- wherein said single drive mechanism includes a motor (23) fixedly connected to said lower steering column jacket.
- wherein said motor includes a rotatable shaft (inherent) and said member moves linearly in response to rotation of said shaft (see abstract).
- wherein said member encircles said shaft (encircles is being considered as a verb, see figure 2, member 26 tilts or encircles the motor shaft (located inside motor).
- wherein said locking device includes a locking arm (17 or 4) engaged for pivoting movement with said upper steering column jacket between a tilting-locked position and a telescoping-locked position (see abstract).
- including a pivoting device (the other of 17 or 4, see above) operably associated with said locking device to direct said pivoting movement of said locking arm between said tilting-locked and telescoping-locked positions (the recitation "to direct said pivoting movement of said locking arm between said tilting-locked and telescoping-locked positions" is considered as functional language and is given no patentable weight, see MPEP 2114).
- wherein said pivoting device includes a lever arm (2) pivotally associated with said upper steering column jacket adjacent to said tilt housing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14-17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiragushi JP 02133280A in view of Arihara US 2003/0222448.

Hiragushi discloses all of the claimed subject matter as described above.

Hiragushi does not disclose a slide block extending from said upper steering column jacket and supporting said locking arm, said lower steering column jacket defining a slot and said slide block extending through said slot, said slide block defining an aperture and said member extending through said aperture, and a resilient member disposed between said slide block and said locking arm.

Arihara teaches a slide block (20, 22, 25, 34, 28) extending from said upper steering column jacket and supporting a locking arm (the block supports the locking arm functionally, in that the function, and operate together), said lower steering column jacket defining a slot (1a) and said slide block extending through said slot (see figure 2), said slide block defining an aperture and said member (19) extending through said aperture, for the purpose of providing a shorter drive shaft decreasing the possibility of interference with neighboring parts, such as a steering lock unit, wiring of electric parts and the like, decreasing difficulty in selecting a desired layout of such parts in the steering column (Paragraphs [0007-0008]).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Hiragushi and provide a slide block extending from said upper steering column jacket and supporting said locking arm, said lower

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steering column jacket defining a slot and said slide block extending through said slot, said slide block defining an aperture and said member extending through said aperture, and a resilient member disposed between said slide block and said locking arm, as taught by Arihara, for the purpose of providing a shorter drive shaft decreasing the possibility of interference with neighboring parts, such as a steering lock unit, wiring of electric parts and the like, decreasing difficulty in selecting a desired layout of such parts in the steering column.

Regarding claim 17, Hiragushi discloses:

- a resilient member (19) disposed between said slide block and said locking arm

Hiragushi discloses all of the claimed subject matter as described above.

Hiragushi does not explicitly disclose a switch communicating with said motor for selectively engaging said motor to rotate said shaft and being rotatably positioned at an end of a lever arm.

Arihara teaches a switch (SW, Paragraph [00042], the bar is considered to be the lever arm) communicating with said motor for selectively engaging said motor to rotate said shaft and being rotatably positioned at an end of a lever arm for the purpose of selectively energizing a motor in a chosen direction (Paragraph [00042], SW)

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Hiragushi and provide a switch communicating with said motor for selectively engaging said motor to rotate said shaft and being

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rotatably positioned at an end of a lever arm, as taught by Arihara, for the purpose of selectively energizing a motor in a chosen direction.

Allowable Subject Matter

6. Claims 11, 12, 13, 18, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terence Boes whose telephone number is (571) 272-4898. The examiner can normally be reached on Monday - Friday 9:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TB
10/19/06



RICHARD RIDLEY
SUPERVISORY PATENT EXAMINER